

## Blast of SEQ ID NO:1 versus human genomic sequence

MEGABLAST 1.2.3-Paracel [2001-11-20]

Reference:

Zheng Zhang, Scott Schwartz, Lukas Wagner, and Webb Miller (2000),  
"A greedy algorithm for aligning DNA sequences",  
J Comput Biol 2000; 7(1-2):203-14.

Database: Homo\_sapiens.latestgp.masked.fa  
33,840 sequences; 200,810,911,373 total letters

Query= 1  
(3753 letters)

Sequences producing significant alignments:	Score (bits)	E Value
AL033377.2.1.135090	1245	0.0
AL360007.11.1.90011	198	2e-47

>AL033377.2.1.135090  
Length = 135090

Score = 1245 bits (628), Expect = 0.0  
Identities = 628/628 (100%)  
Strand = Plus / Plus

Query: 444 agttgccgtgtccttaaggaatcaaaaggcattttacccagacatcagatgcttacca 503  
Sbjct: 36010 agttgccgtgtccttaaggaatcaaaaggcattttacccagacatcagatgcttacca  
36069

Query: 504 ggtatctgttgcaaaaaggcatctctattccagagctcagtgccttcacactctgcttga 563  
Sbjct: 36070 ggtatctgttgcaaaaaggcatctctattccagagctcagtgccttcacactctgcttga  
36129

Query: 564 agcaaccaaagttggccatgaagacagtgattggacagcttctactcaaatgcata 623  
Sbjct: 36130 agcaaccaaagttggccatgaagacagtgattggacagcttctactcaaatgcata  
36189

Query: 624 cttcacacaattgctcagttggaaaggccaagagtggctacttttatccatttctga 683  
Sbjct: 36190 cttcacacaattgctcagttggaaaggccaagagtggctacttttatccatttctga  
36249

Query: 684 ttcaaaatgttgttgaataatgcattacctgtcaaagaaaaagaagacatttgcaga 743  
Sbjct: 36250 ttcaaaatgttgttgaataatgcattacctgtcaaagaaaaagaagacatttgcaga  
36309

Query: 744 aagctttgaacagctctgccttggaaataattcttgggcttattgggtaaattt 803  
Sbjct: 36310 aagctttgaacagctctgccttggaaataattcttgggcttattgggtaaattt  
36369

Query: 804 caaaagaaactatgaaacagttccatgtgattctaccattagtaaagttattcctggaa 863  
Sbjct: 36370 caaaagaaactatgaaacagttccatgtgattctaccattagtaaagttattcctggaa  
36429

Query: 864 tggaaaattgttggctccaaatcaaaatgaaattgtctctctaaaaggggacattta 923  
Sbjct: 36430 tggaaaattgttggctccaaatcaaaatgaaattgtctctctaaaaggggacattta  
36489

Query: 924 taactttcgactttgaaatttaccatgaatgccaaaatcctctccaacctcagctgtaa 983  
Sbjct: 36490 taactttcgactttgaaatttaccatgaatgccaaaatcctctccaacctcagctgtaa  
36549

```
Query: 984    tgtgaaaggaaatgttagtcgactggcaaaatgacttctgaaatatcccaaacctagctct
1043
Sbjct: 36550  tgtgaaaggaaatgttagtcgactggcaaaatgacttctgaaatatcccaaacctagctct
36609
```

Score = 690 bits (348), Expect = 0.0  
Identities = 348/348 (100%)  
Strand = Plus / Plus

Query: 98 cagcagtgtggggatgtgccaactgccgagtggtttgcacccctctggacctta.157  
Sbjct: 33405 cagcagtgtggggatgtgccaactgccgagtggtttgcacccctctggacctta  
33464

Query: 158 cttctccatgctaccctaaccgactacccaaacagccaggcttgcattggacgctccgag 217  
Sbjct: 33465 cttctccatgctaccctaaccgactacccaaacagccaggcttgcattggacgctccgag  
33524

Sbjct: 33525 cccccaccgttatcattcagataacattaaacgacttgacattgaagaagctccca  
33584

Query: 278 attgcatttatgactcattatcccttgcataatggagagagccagactaaatttgcggag 337  
|||||

Sbjct: 33585 attgcatttatgactcattatcccttgcataatggagagagccagactaaatttgcggag  
33644

Query: 338 caactgccaaggcctatcatttaactcaagtgcgaatgagatgcattgtgcctttcaa 397  
|||||

Sbjct: 33645 caactgccaaggcctatcatttaactcaagtgcgaatgagatgcattgtgcctttcaa  
33704

Query: 398 gtgacttttagcatccagaagaaaggttcaatgccagctacatcagag 445  
|||||

Sbjct: 33705 gtgacttttagcatccagaagaaaggttcaatgccagctacatcagag 33752

Score = 565 bits (285), Expect = e-158

Identities = 285/285 (100%)

Strand = Plus / Plus

Query: 3036 ctgttggattcaagatccagtcatatttatgtgacctgtgcggatatttggagtcat  
3095  
|||||

Sbjct: 85663 ctgttggattcaagatccagtcatatttatgtgacctgtgcggatatttggagtcat  
85722

Query: 3096 gtttttctgaacattgccatgttcattgtggtaatggcagatctgtggaggaatgg  
3155  
|||||

Sbjct: 85723 gtttttctgaacattgccatgttcattgtggtaatggcagatctgtggaggaatgg  
85782

Query: 3156 caagagaagcaaccggaccctgagagaagaagtgttaaggAACCTGCGCAGTGTGGTTAG  
3215  
|||||

Sbjct: 85783 caagagaagcaaccggaccctgagagaagaagtgttaaggAACCTGCGCAGTGTGGTTAG  
85842

Query: 3216 cttgacctttctgtggcatgacatgggtttgcattttgcctggggacccttaaa  
3275  
|||||

Sbjct: 85843 cttgacctttctgtggcatgacatgggtttgcattttgcctggggacccttaaa  
85902

Query: 3276 tatccccttcatgtacactttccatttcaatttattacaagg 3320  
|||||

Sbjct: 85903 tatcccttcatgtaccttctccatcttcaattcattacaagg 85947

Score = 537 bits (271), Expect = e-149  
Identities = 271/271 (100%)  
Strand = Plus / Plus

Query: 2670 gaaattgcgaaaggattatccctccaaatcttgcataaacctgagcacagccctgcttt  
2729 . . .

Sbjct: 81638 gaaattgcgaagggattatccctccaaatcttgcacacgcacagccctgcttt  
81697

Query: 2730 cctgaatccctttcccttagatggctggatcaccccttcaatgtggatggacttgc  
2789

Sbjct: 81698 cctgaatctctttcccttagatggctggatcaccccttcaatgtggatggactttg  
.....

Query: 2790 cattgctgttcagtcctgttcatttccttctggcaaccttacctggatgggct  
2810

Sbjct: 81758 cattgctgttcagtcctgtgcattcttcattggcaacttacctggatggggct  
81817

Query: 2850 agaagcaattcacatgtacattgtcttagttaaagtatttaacacttacattcgccgata  
2859

Sbjct: 81818 agaagcaattcacatgtacattgctctagttaaagtat<sup>ta</sup>acacttacattcgccgata  
81877

Query: 2910 cattctaaaattctgcatcattggctgggt 2940

Sbjct: 81878 cattctaaaattctgcatcattggctgggt 81908

Score = 420 bits (212), Expect = e-114  
Identities = 215/216 (99%)  
Strand = Plus / Plus

Query: 1740 tttaaaaagaagcaaatgaagttgctaaccagatttaaatttaactgctgatggcagaa  
1799

68457 tttagaagaagcaaatgaagttgctaaccagatttaatttaactgctgatggcagaa  
68516

Query: 1800 cttaacctcagccaatattaccaacattgtggAACAGGGTCAAAAGAATTGTGAATAAGA  
1859

Sbjct: 68517 cttaacctcagccaatattaccaacattgtggaacaggtcaaaagaattgtgaataaaga  
68576

Query: 1860 agaaaacattgatataaacacttggtcaactctaataatgttaag  
1919

Sbjct: 68577 agaaaacattgatataaacacttggtcaactctaataatgttaag  
68636

Query: 1920 cagttcagacagtgacttgcttgagtcatcttctga 1955

Sbjct: 68637 cagttcagacagtgacttgcttgagtcatcttctga 68672

Score = 361 bits (182), Expect = 2e-96

Identities = 182/182 (100%)

Strand = Plus / Plus

Query: 3572 cagacagtgttccatggacaagtcctgtcaaaactggccatgctgatggagatcaa  
3631

Sbjct: 109176 cagacagtgttccatggacaagtcctgtcaaaactggccatgctgatggagatcaa  
109235

Query: 3632 catcaatcatccctgtccatcaggtcattgataaggtaagggtattgcaatgctcatt  
3691

Sbjct: 109236 catcaatcatccctgtccatcaggtcattgataaggtaagggtattgcaatgctcatt  
109295

Query: 3692 cagacaacttctataaaaatattatcatgtcagacacccatcagccacagcacaaagttt  
3751

Sbjct: 109296 cagacaacttctataaaaatattatcatgtcagacacccatcagccacagcacaaagttt  
109355

Query: 3752 aa 3753

||  
Sbjct: 109356 aa 109357

Score = 341 bits (172), Expect = 2e-90

Identities = 172/172 (100%)

Strand = Plus / Plus

Query: 1956 agtttaaaaacaattgtgaattggccttcaagatagacctaatacgacatcacatgt  
2015

|||  
Sbjct: 69644 agctttaaaaacaattgatgaattggccttcaagatagacctaatacgacatcacatgt  
69703

Query: 2016 gaatattacaactcggaacttggcttcagcgtatcatccctgttaccaggacaaatgc  
2075

|||  
Sbjct: 69704 gaatattacaactcggaacttggcttcagcgtatcatccctgttaccaggacaaatgc  
69763

Query: 2076 aatttcaaatttttagcattggcttccaagcaataatgaatcgattccag 2127

|||  
Sbjct: 69764 aatttcaaatttttagcattggcttccaagcaataatgaatcgattccag 69815

Score = 309 bits (156), Expect = 7e-81

Identities = 156/156 (100%)

Strand = Plus / Plus

Query: 3419 cagattggagtaagacagctaccaatcatcaagaaaagttctgataatctaggaaaat  
3478

|||  
Sbjct: 104051 cagattggagtaagacagctaccaatcatcaagaaaagttctgataatctaggaaaat  
104110

Query: 3479 ctttgttcaagctccattggtccaactcaacctatcttacatccaaatctaaatcca  
3538

|||  
Sbjct: 104111 ctttgttcaagctccattggtccaactcaacctatcttacatccaaatctaaatcca  
104170

Query: 3539 gctctaccacctattcaaaaggaatagccacacag 3574

|||  
Sbjct: 104171 gctctaccacctattcaaaaggaatagccacacag 104206

Score = 287 bits (145), Expect = 3e-74

Identities = 145/145 (100%)

Strand = Plus / Plus

Query: 2125 cagatggatttgagagtggacaagtggatccactggcatctgtatattgcctccaaac  
2184

|||  
Sbjct: 71527 cagatggatttgagagtggacaagtggatccactggcatctgtatattgcctccaaac  
71586

Query: 2185 ttacttgagaatttaagtccagaagattctgtatttagtagaaagagcacagttactttc  
2244

Sbjct: 71587 ttacttgagaatttaagtccagaagattctgtatttagtagaagagcacagttacttcc  
71646

Query: 2245 ttcaacaaaactggactttccagg 2269  
Sbjct: 71647 ttcaacaaaactggactttccagg 71671

Score = 283 bits (143), Expect = 4e-73  
Identities = 146/147 (99%)  
Strand = Plus / Plus

Query: 1423 agttggtgcttggccctttagttacaatgtaccaacaatactaattttagaagga  
1482  
Sbjct: 63453 agttggtgcttggccctttagttacaatgtaccaacaatactaattttagaagga  
63512

Query: 1483. aaaatcattcagcagaagctcctaaaaataatgagtccttggatgaaggcttgggcta  
1542  
Sbjct: 63513 aaaatcattcagcagaagctcctaaaaataatgagtccttggatgaaggcttgggcta  
63572

Query: 1543 catacagtgaatgtgagacaactgggt 1569  
Sbjct: 63573 catacagtgaatgtgagacaactgggt 63599

Score = 258 bits (130), Expect = 2e-65  
Identities = 130/130 (100%)  
Strand = Plus / Plus

Query: 2541 ggaccttccaagaagtgcctcacagtttagatgcaagaaacactaaagtccactttcat  
2600  
Sbjct: 80810 ggaccttccaagaagtgcctcacagtttagatgcaagaaacactaaagtccactttcat  
80869

Query: 2601 cagctatattgggtgtgaaatatctgctattttcagcagcaacttcctgacatatgt  
2660  
Sbjct: 80870 cagctatattgggtgtgaaatatctgctattttcagcagcaacttcctgacatatgt  
80929

Query: 2661 tgcttttag 2670  
|||||||

Sbjct: 80930 tgctttgag 80939

Score = 244 bits (123), Expect = 3e-61  
Identities = 123/123 (100%)  
Strand = Plus / Plus

Query: 2267 aggatgttaggaccccaaagaaaaacttttagtgagttatgtatggcggtgcagtattggaa  
2326

Sbjct: 73990 aggatgttaggaccccaaagaaaaacttttagtgagttatgtatggcggtgcagtattggaa  
74049

Query: 2327 acattactatccagaatctgaaggatcctgttcaaataaaaatcaaacataacaagaactc  
2386

Sbjct: 74050 acattactatccagaatctgaaggatcctgttcaaataaaaatcaaacataacaagaactc  
74109

Query: 2387 agg 2389

Sbjct: 74110 agg 74112

Score = 224 bits (113), Expect = 3e-55  
Identities = 113/113 (100%)  
Strand = Plus / Plus

Query: 1567 ggtcattgtcttgcattggaggaacccaaaggctactactggccatctatccaaaccttct  
1626

Sbjct: 66326 ggtcattgtcttgcattggaggaacccaaaggctactactggccatctatccaaaccttct  
66385

Query: 1627 gaatacgttcttcattgtccagacaagcctggctttctgcttcggatatg 1679

Sbjct: 66386 gaatacgttcttcattgtccagacaagcctggctttctgcttcggatatg 66438

Score = 214 bits (108), Expect = 3e-52  
Identities = 112/113 (99%), Gaps = 1/113 (0%)  
Strand = Plus / Plus

Query: 2431 aaca-aaagtttggaggatggaacacgtcaggatgtgtgcacacagagattcagatgc  
2489

Sbjct: 77142 aacagaaaagtttggaggatggaacacgtcaggatgtgtgcacacagagattcagatgc  
77201

Query: 2490 aagtgagacagtctgcgtgtaaaccactcacacacttggagttctgatgg 2542  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Sbjct: 77202 aagtgagacagtctgcgtgtaaaccactcacacacttggagttctgatgg 77254

Score = 198 bits (100), Expect = 2e-47  
Identities = 103/104 (99%)  
Strand = Plus / Plus .

Query: 3318 aggcttatttatattcatcttccactgtgtatgaaggagaatgttcagaaacagtggcg  
3377 |||||||  
Sbjct: 103274 aggcttatttatattcatcttccactgtgtatgaaggagaatgttcagaaacagtggcg  
103333 |||||||

Score = 172 bits (87), Expect = 1e-39  
Identities = 87/87 (100%)  
Strand = Plus / Plus

Query: 1282 aaagtacagagcaagggtggcagaatgg 1308  
||| ||| ||| ||| ||| ||| ||| |||  
Sbjct: 56159 aaagtacagagcaagggtggcagaatgg 56185

Score = 170 bits (86), Expect = 4e-39  
Identities = 86/86 (100%)  
Strand = Plus / Plus

Query: 1137 agctactgtaaaactctccttagtactacaccacccactgtcaccactaacatgcctgtac  
1196  
Sbjct: 49600 agctactgtaaaactctccttagtactacaccacccactgtcaccactaacatgcctgtac  
49659

Query: 1197 taacagaatcgataaacaacaaaggaaatg 1222

Sbjct: 49660 taacagaatcgataaacaaggaaatg 49685

Score = 139 bits (70), Expect = 1e-29  
Identities = 70/70 (100%)  
Strand = Plus / Plus

Query: 1069 ggttcctacctgatcccgtcccagcagcagaactggccagctgtgcagacctgggacc  
1128

Sbjct: 47792 ggttcctacctgatcccgtcccagcagcagaactggccagctgtgcagacctgggacc  
47851

Query: 1129 ctctgtcaag 1138

Sbjct: 47852 ctctgtcaag 47861

Score = 133 bits (67), Expect = 9e-28  
Identities = 67/67 (100%)  
Strand = Plus / Plus

Query: 1360 agttttcacctgagtgctggagaggacaagattaaagtcaagagaagccttgaggatgag  
1419

Sbjct: 59736 agttttcacctgagtgctggagaggacaagattaaagtcaagagaagccttgaggatgag  
59795

Query: 1420 ccaaggt 1426

Sbjct: 59796 ccaaggt 59802

Score = 131 bits (66), Expect = 4e-27  
Identities = 66/66 (100%)  
Strand = Plus / Plus

Query: 1679 gttttacaatgctaccaacccattggtaacctactgggacctgttgatatctccaact  
1738

Sbjct: 67835 gttttacaatgctaccaacccattggtaacctactgggacctgttgatatctccaact  
67894

Query: 1739 gtttaa 1744

Sbjct: 67895 gtttaa 67900

Score = 107 bits (54), Expect = 5e-20  
Identities = 54/54 (100%)  
Strand = Plus / Plus

Query: 1308 gctcaattcaacccattccaaaatttggaaactacacggttatgtcgtaatatcag 1361  
Sbjct: 58789 gctcaattcaacccattccaaaatttggaaactacacggttatgtcgtaatatcag 58842

Score = 103 bits (52), Expect = 8e-19  
Identities = 52/52 (100%)  
Strand = Plus / Plus

Query: 2938 ggtttgcctgccttagtgggttcagttgttctagcgagcagaaacaacaatg 2989  
Sbjct: 83114 ggtttgcctgccttagtgggttcagttgttctagcgagcagaaacaacaatg 83165

Score = 95.6 bits (48), Expect = 2e-16  
Identities = 55/57 (96%), Gaps = 1/57 (1%)  
Strand = Plus / Plus

Query: 2387 aggaagtgcataatccatctgtgccttctggatctgaacaaaacaa-aagttt 2442  
Sbjct: 75714 aggaagtgcataatccatctgtgccttctggatctgaacaaaacagtaagttt 75770

>AL360007.11.1.90011  
Length = 90011

Score = 198 bits (100), Expect = 2e-47  
Identities = 100/100 (100%)  
Strand = Plus / Plus

Query: 1 atgtttcgctcagatcgaatgtggagctgccattggaaatggaaaggcccagtcctctcctg 60,  
Sbjct: 65298 atgtttcgctcagatcgaatgtggagctgccattggaaatggaaaggcccagtcctctcctg  
65357

Query: 61 ttcttatttgctttatataatcatgtgtgttcctcaactcag 100  
Sbjct: 65358 ttcttatttgctttatataatcatgtgtgttcctcaactcag 65397